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# History of unique heliometric observations of the moon's physical libration

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## Abstract

© Medwell Journals, 2016.The research is devoted to the investigation history of the kinetic and dynamic parameters of the Moon. Today, the Moon is the subject of a comprehensive study in many space experiments. In this research, we proposed a historical analysis of unique Heliometric observations of the Moon's physical libration. The article described the history of the beginning of observations and study of the physical libration of the Moon in Engelhardt Astronomical Observatory (EAO) and the main results obtained by these studies. The programs of space missions consist of the subtle effects investigation of the rotational motion and the physical liberation, a study of the gravitational field of the Moon and planets crosslink tracking methods, creating a selenographic coordinate system and the standing the variety of the internal structure of the Moon. Unquestionably, the basis for all these studies are the classic Heliometric observations of lunar physical liberation started over 100 years ago. In 2015, it was the 100th anniversary of Banachiewicz's series of physical libration of the Moon creation. The values of the parameters of the lunar physical libration obtained from Heliometric observations are given. The study also describes Banachiewicz's observations on the meridian circle, participation in observations of a solar eclipse at the 1912 year and gravimetric expeditions.

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## Keywords

Astronomical observations, History of unique Heliometer's observations, Kinetic and dynamic lunar parameters, Physical libration of the Moon, Russia